

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
1 February 2001 (01.02.2001)

PCT

(10) International Publication Number  
**WO 01/07950 A1**

(51) International Patent Classification<sup>7</sup>: **G02B 6/34,**  
B07C 5/342, G01N 21/47

(21) International Application Number: PCT/BE00/00088

(22) International Filing Date: 20 July 2000 (20.07.2000)

(25) Filing Language: Dutch

(26) Publication Language: English

(30) Priority Data:  
9900503 23 July 1999 (23.07.1999) BE

(71) Applicant (for all designated States except US): **BARCO**  
**ELBICON N.V.** [BE/BE]; Industrierrein Nieuwland,  
Nieuwlandlaan 30A, B-3200 Aarschot (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **NASILOWSKI,**

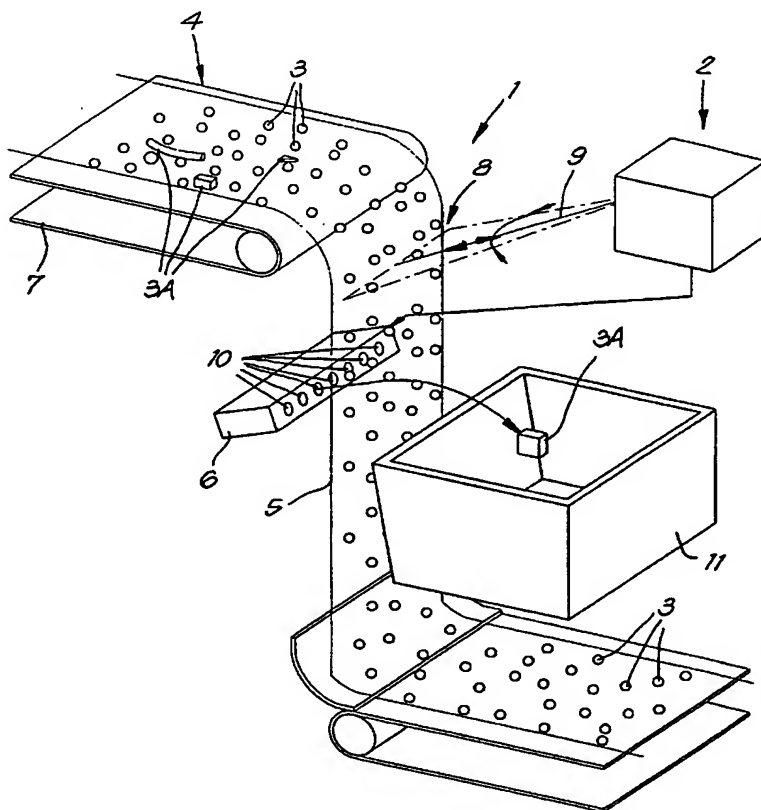
**Tomasz, Andrzej** [PL/BE]; Waversesteenweg 607,  
B-1040 Etterbeek (BE). **CALCOEN, Johan** [BE/BE];  
Bunsingstraat 14, B-3012 Leuven (BE). **JANSSENS,**  
**Carlo** [BE/BE]; Lakeman 47, B-1840 Londerzeel (BE).  
**DEBAES, Nathalie** [BE/BE]; Tiensestraat 2, B-3200  
Aarschot (BE). **THIENPONT, Hugo** [BE/BE]; Jozef  
Debusscherstraat 42, B-1500 Halle (BE).

(74) Agent: **DONNÉ, Eddy**; Bureau M.F.J. Bockstael NV,  
Arenbergstraat 13, B-2000 Antwerpen (BE).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE,  
DK, DM, DZ, EE, ES, FI, GB, GE, GH, GM, HR, HU,  
ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS,  
LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO,  
NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR,  
TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

[Continued on next page]

(54) Title: **SORTING DEVICE**



(57) Abstract: Sorting device, provided with an inspection unit (2), where products (3-3A) to be sorted are inspected on their acceptability, a transport system (4) feeding a product flow (5) of products (3-3A) to be sorted to the inspection unit (2), and a rejection unit (6) taking unacceptable products (3-3A) out of the product flow (5), characterized in that the inspection unit (2), at the sending side, is provided with at least two sources, more particularly light sources (17-18-32), for generating electromagnetic radiation, more particularly light (L1-L2-L3), as well as with means, making use of waveguide technology, for having the electromagnetic radiation meet the products (3-3A) to be sorted, whereby these means function as an alignment system for the radiation originating from the aforementioned sources (17-18-32).

WO 01/07950 A1



(84) **Designated States (regional):** ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— *With international search report.*

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*